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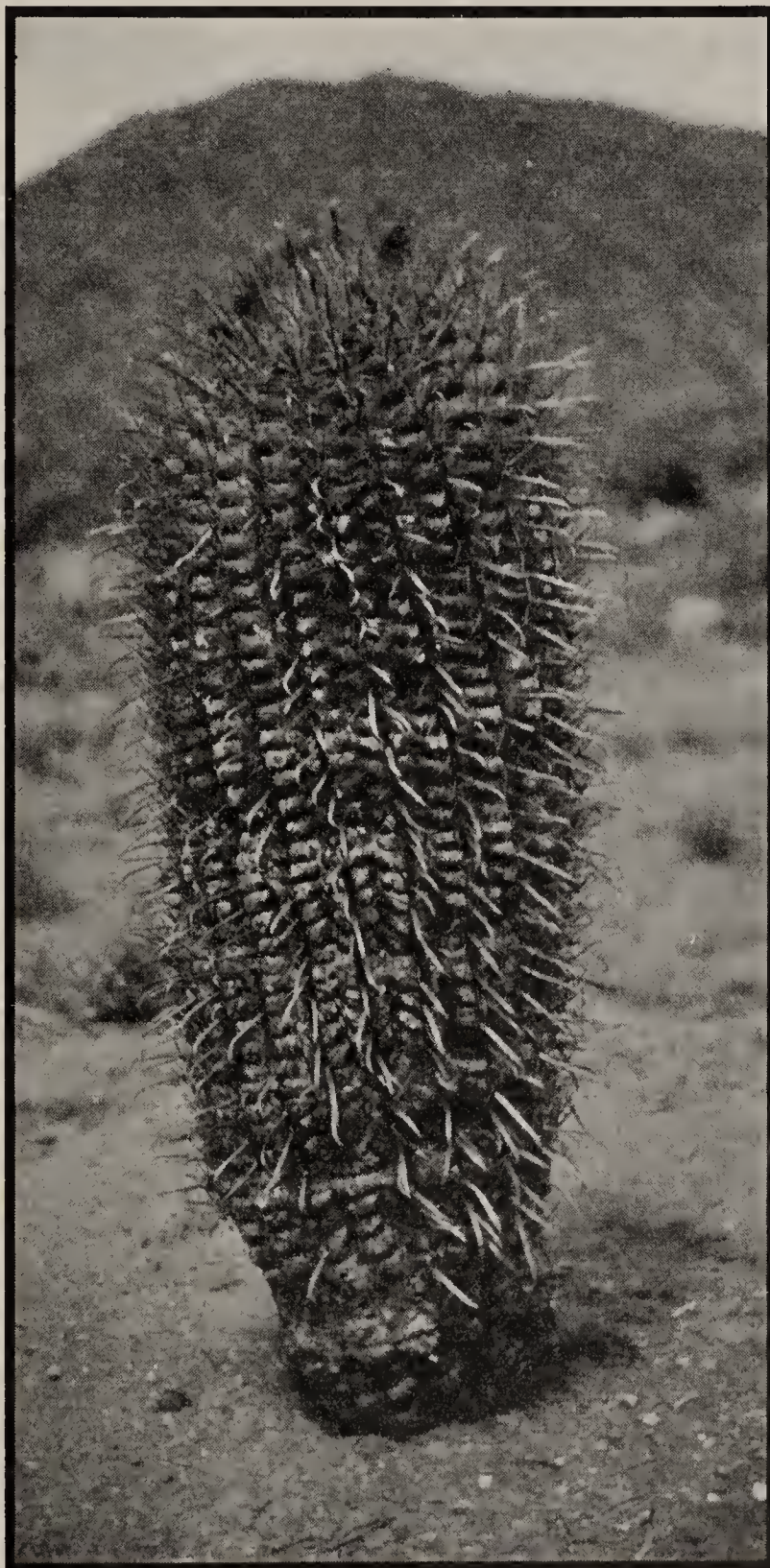
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Descriptive Price List

HOWARD E. GATES FAMOUS CACTUS GARDENS

**119 South Illinois Street
Anaheim - California**

*Winner of the Trophy Cups for the best Collection of Cactus
Plants at the 1932, 1933 and 1934 Exhibitions of the Cactus and
Succulent Society of America.*



Ferocactus coloratus

VISITORS

are welcome in our gardens at all times except Sunday mornings

TERMS

It is a pleasure to issue this 1935 Catalogue listing a greater variety of choice plants than ever before and at lower prices. We believe they are correctly named as we take pride in proper labelling. We do not believe such terms as "two year old seedling, etc.," mean anything at all because of the great variations found in the same sowing of seed and the varying abilities of various growers. We have endeavored to indicate the minimum size and exact delivered cost of each item. All are strong, healthy plants grown in our favorable climate without artificial heat. The following signs and abbreviations are used in the listings: **in.** for inch (equal to about 2½ centimeters), **RC** for rooted cutting, **P** for plant, **S** for seedling. The size quoted means either height or diameter, whichever is greater, exclusive of spines.

FREE DELIVERY

Prices include careful packing in suitable containers and free delivery on all orders amounting to \$1.00 or more. On smaller orders please add 15c. **California clients only** must add the 2½ % sales tax to their remittances. We cannot be responsible for non-receipt of stamps, coins or currency.

WARRANTY

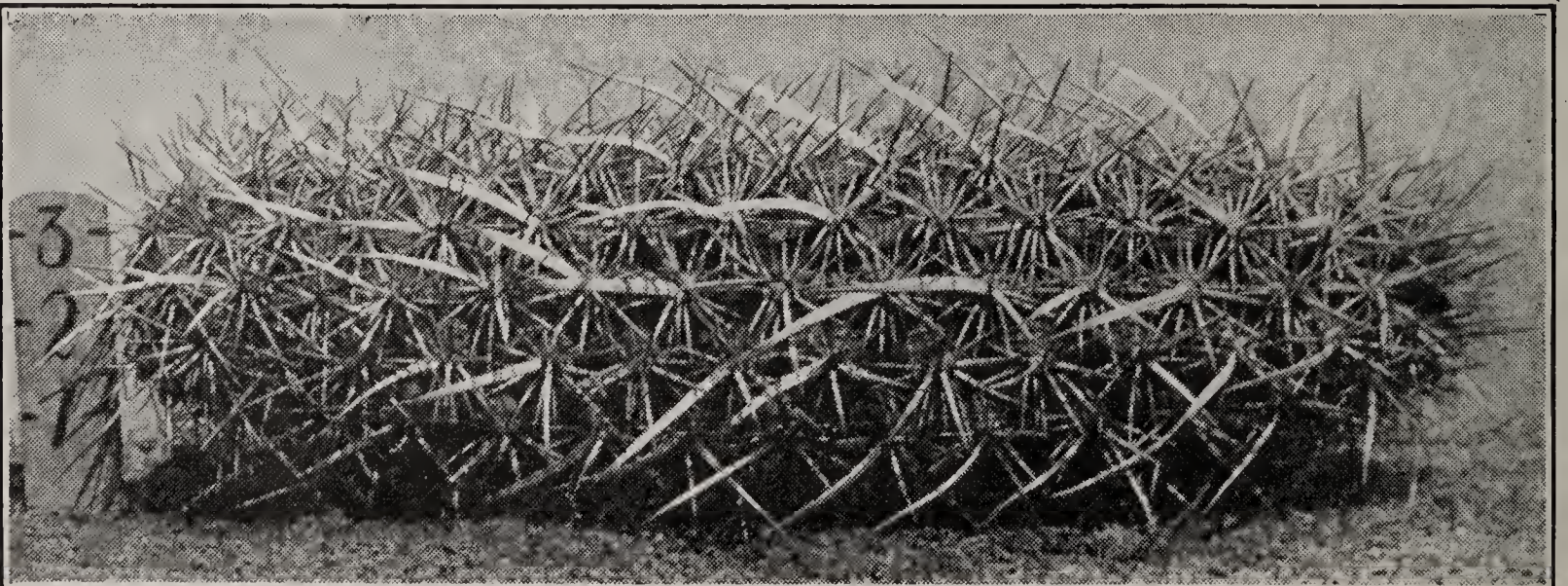
All shipments are warranted to be healthy and able to pass any horticultural inspection. Safe delivery to any point in the United States is guaranteed. Our responsibility ceases when plants are delivered in good condition.

CANADIAN SHIPMENTS

Prices include delivery to Canadian points. Orders from Canada must be accompanied by Canadian Government importation permits. These may be obtained free on application to The Secretary, Destructive Insect and Pest Advisory Board, Department of Agriculture, Ottawa.

FOREIGN DELIVERIES

Prices include carriage costs to all countries in the Postal Union to which the fees do not exceed 20c per pound. This includes practically all countries in direct connection with the United States. Loss of plants in transit is at customer's risk except in the case of rejection by proper Horticultural Authorities on account of diseases and pests. Foreign clients should advise us of any special importation permit, special customs papers or health certificates required by their respective governments, in order to avoid loss or delay.



ONE FOOT PLANT *MACHAEROCEREUS ERUCA*
"The Creeping Devil"



LOPHOCEREUS SCHOTTII

*Monstrous forms on left. Normal hairy tip and young branch tip on right.
Specimens 6 and 12 inches high.*

LOWER CALIFORNIA PLANTS

Our seven long exploring trips throughout the length and breadth of the peninsula of Lower California, Mexico, have given us a wider experience in that territory and a larger collection of peninsular plants than is possessed by any other firm. We have found about twenty-five entirely new species of Cactus and about forty new Dudleyas. These trips have also enabled us to introduce a number of other previously known plants that have not been in cultivation. Some of these plants are offered for the first time in this catalogue. Others will be ready next year.

Bartschelia schumannii. (Mammillaria)

Grows in the last few miles of the peninsula. It forms compact clusters of low, biscuit shaped heads bearing pretty clusters of brown and white spines. The large pink flowers are followed by scarlet fruits.....1 in. S 25c, 1½ in. S 35c

Bergerocactus emoryii. (Cereus) Forms clumps of rather slender canes hidden by fine, yellow to brown spines. Yellow flower. Should be grown in partial shade.....6 in. P 50c, larger to \$1.50

Cochemeia poselgeri. (Mammillaria roseana)

Forms clusters of tall heads bearing overlapping tubercles with a long hooked spine in each cluster. Scarlet flowers shaped like Christmas Cactus flowers.....1½ in. S 25c, 2 in. 35c, 3 in. 50c, RC 50c, 75c, \$1.00

Echinocereus barthelowanus. Grows in dense clusters of small heads hidden by many straight brown to purple spines. Rooted divisions35c

Ech. brandegeei. Forms loose clusters of large, long heads bearing flat heavy spines, large clear pink flowers.....
.....RC 35c, 50c, 75c

Ech. ferreirae. (Gates in litt.) A new species discovered on our 1934 Mexican trip. This is to be named in honor of Senor Enrique Ferreira, Consul of Mexico in San Diego, who has greatly facilitated our explorations. This species somewhat resembles *Ech. fendleri*. However it has a peculiarity in common with *Ech. barthelowanus* in that every branch forms its own roots. It has a remarkably large, clear pink flower bearing white spine clusters on the outer perianth segments.....RC 75c, \$1.00

Ech. mammillatus. This is so rare we have found only one cluster. The ribs are broken up into separate mammillae bearing clusters of short, stiff, gray spines. Only a few rooted cuttings this year at\$1.00

Ech. maritimus. (*Cereus flaviflorus*). This species forms large, many headed clusters along the seacoast. The spines vary from yellow to gray. The yellow flowers are produced throughout a very long season. One of our large clusters was in blossom for six months. RC 25c, 35c, 50c. Specimens from.....\$1.00 to \$2.50

Ech. pacificus. We finally found this elusive beauty on our 1934 trip. Its densely clustered small heads freely bear brown to purplish spines. The flower is red.....RC 35c, 50c, 75c, \$1.00

Ech. pensilis. All the known plants in the U. S. of this pendant beauty came from a hard mule trip we made high into the mountains of its type locality. Branches are peagreen, an inch or more in diameter, almost white spines. Scarlet flower. A few grafted plants only at\$1.50

Ech. sciurus. Forms Mammillaria like clusters of fat heads covered with short, white to gray spines. The very large flower is a vivid, clear pink. It is much stronger when grafted.....
.....RC 75c. Grafted \$1.25, \$1.50

Ferocactus. This globular to cylindric group of Echinocactae reach their greatest glory and abundance in Lower California. Over half the known species are found in the peninsula. We are pleased to offer for the first time seedlings of several of our own discoveries.

F. coloratus. (Gates 1933). Bears clusters of reddish brown spines that are probably the widest on any known cactus....
.....1 in. S 25c

F. fordii. A small seacoast species bearing broad gray spines and beautiful pink flowers
.....1 in. S 25c, 1½ in. S 35c, 2 in. S 50c

F. gracilis. (Gates 1933). Is a tall growing, red spined species bearing red and yellow flowers....1 in S 25c, 1½ in. S 35c
Plants.....75c to \$3.00

F. rectispinus. The Hat Pin Cactus in probably the longest spined of any cactus. Its straight round spines often reach ten inches in length.....
.....1½ in. S 35c, 2 in. S 50c



Ferocactus vizcainensis

LOWER CALIFORNIA COLLECTION

A choice group for your own garden. An excellent gift for your fancier friends. No *Opuntias* except *Invicta*.

10 Choice Seedlings\$2.50

17 Choice seedlings and propagations including one grafted *Echinocereus sciurus*.. 5.00

F. tortulospinus. The Twisted Spined Cactus. First described by us in 1933. It is noted for long twisted and curved, red or gray spines and yellow flower. 1 in. S ready in May.....35c

F. townsendianus. Has broad green ribs topped by clusters of small light gray spines. Flower red and yellow.....1½ in. S 25c, 2 in. S 35c, 3 in. S 50c

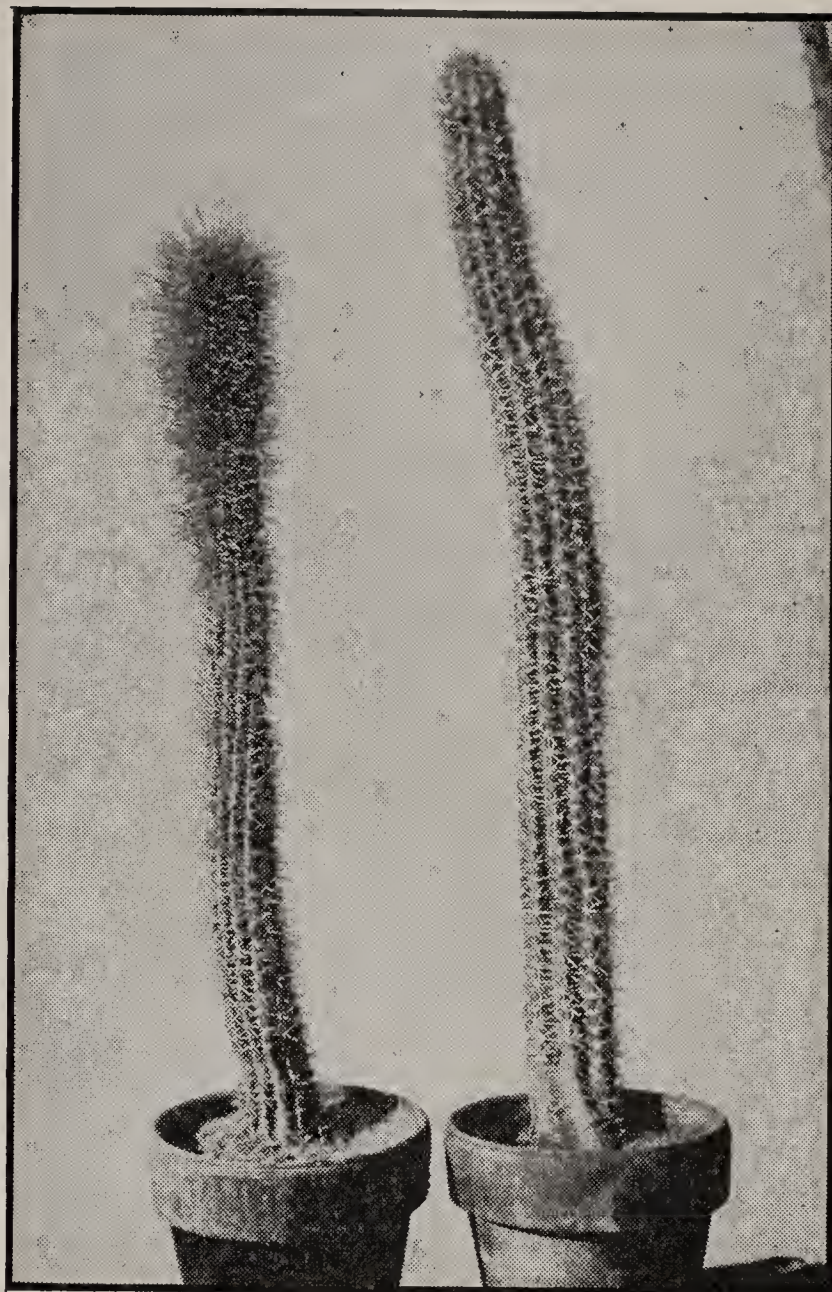
F. viridescens var. littoralis. This is the variety we formerly offered as *F. orcuttii*. We find it is another variety, possibly a new species. The spines are more slender, more numerous and more colorful than those of *F. viridescens*. It seldom grows over a foot high. Spines are yellow or reddish, flower greenish yellow1 in. S 25c, 1½ in. S 35c, 2 in. S 50c

F. vizcainensis. (Gates 1933). Globular, bearing clusters of very long, heavy, strongly hooked, reddish brown spines1½ in. S 35c

Grusonia is a subdivision of the *Opuntia* group. They resemble the *Cylindropuntias* or Chollas except that the spine clusters are borne on definite ribs instead of separate tubercles. Until our Lower California trips were begun, only *G. bradtiana* was known.

G. hamiltoniae. (Gates in litt.). Unpublished, found on our 1934 Mexican trip. This is to be named for Miss Hattie Hamilton who lives in a house by the side of the road in Lower California and is a friend of the traveler. Dark green branches, with widely separated clusters of dark, heavy, sheathed spines. Only a few to spare this year..RC \$1.00

G. rosarica. (Gates in litt.) An unpublished species found on our 1934 trip to be named for the village off Rosario. The branches bear clusters of fine, brown spines. Flowers unknown....RC 50c, 75c



Lophocereus gatesii

Lophocereus. The Crested *Cereus*, are a genera of many branched plants. The branches usually arise at or near the base. The lower several feet of the branches bear short, stiff spines. The upper portions have numerous hairy spines varying in color from white to black. The trumpet shaped pink flowers are 1½ inches long. Bright red fruit.

L. australis. Slender branches with six to ten angles. This species sometimes reaches a height of twenty-five feet with hundreds of branches arising from a single trunk.....1 in. S ready in May, 25c

L. gatesii. (Marcus Jones 1934) A striking new species discovered on our 1933 expedition. The fluted branches are

LOWER CALIFORNIA OPUNTIA COLLECTION

5 Strong rooted cuttings of these rare plants for.....\$1.00

rounder, bearing more and stronger spines than the other species.....

.....1 in. S ready in May, 35c

L. sargentianus. A slender intermediate form between *Australis* and *Schottii*....

.....1½ in. S 35c

L. schottii. Large four to seven angled branches arising from the ground.....

1½ in. S 25c, 2 in. S 35c, 3 in. S 50c, 5 in. S 75c.

L. schottii monstrosus. The Totem Pole Cactus. This strange freak of nature was christened with this appropriate name by visitors to the Century of Progress Exposition. We have found only two small groups in Lower California. The habit of growth is similar to that of *L. schottii* but the ribless and spineless branches are covered with smooth, green skinned irregular knobs and bumps. Variety *obesus* is the fat, heavy branched form we have offered for the past two years. Variety *Mieckleyanus* is a more slender and freely branched form we found in 1934. Both forms blossom but neither is known to produce seed. Either form RC 3 in. \$1.25, 6 in. \$2.50, 9 in. \$3.75, 12 in. \$5.00, 15 in. \$6.25, 18 in. \$7.50.

Machaerocereus eruca. The famous Creeping Devil Cactus. Found only on the shores of Magdalena Bay, where it grows prostrate on the ground, dying behind as the head advances. Diameter



Machaerocereus eruca



Neomammillaria bullardiana

3 to 5 inches, length up to ten feet. The rooted cuttings we offer are much heavier than the seedlings occasionally offered and bear the mature type of spines.....3 in. RC \$1.25, 6 in. RC \$2.50

Machaerocereus gummosus. (Cereus) The Pithaya Agria. Strongly angled, large branched plant with stiff, dagger like spines. Large white, purple shaded night blooming flower. Spiny, red, edible fruit.....6 in. S 75c

Myrtillocactus cochal. (Cereus) A much branched peninsular form corresponding to *M. geometrizzans*. Dark green branches, dagger like spines..6 in. S 75c

Neomammillaria. This genus is represented in Lower California by many interesting species. The milky section is hemispherical to globular with straight spines and yellow flowers. The non-milky section has long cylindric heads which freely cluster and all have hooked spines.

Neom. arida. A milky type with beautiful white to brown spines. Some wool in the axils.....1 in. S ready in May 25c 2 in. RC now ready \$1.00, Grafted \$1.25

Neom. armillata. Sometimes forms clusters of blue green heads a foot high, bearing clusters of white to rich brown spines. Branches are often marked by darker horizontal bands.....1½ in. S 25c, RC 50c, 75c, \$1.00

Neom. baxteriana. (Gates 1934). Named in honor of the present President of the Cactus and Succulent Society of America. A milky, globular, nearly white spined species. Only a few will be available in 1935. Write us.

Neom. blossfeldiana. (Gates 1933). This species is in a class by itself. Not milky, has roots like a carrot, small globular heads with brown hooked spines, magnificent large pink flower, red fruit. Does marvelously when grafted.....1½ in. P 75c, 2 in. P \$1.00, Grafted \$1.25

Neom. brandegeei. Hemispherical, milky type with fine brown or gray spines.....1 in. S 35c, 2 in. P \$1.00

Neom. bullardiana. (Gates 1934). Named in honor of Howard O. Bullard. One of the choicest things from our 1933 collecting trip. Not milky, fine rather soft white spines with brown hooked centrals, pale pink flowers, red fruits. Clusters freely and is a wonder grafted.....1½ RC 75c, Grafted \$1.25

Neom. capensis. (Gates 1933). A plant we were proud to find and describe. Many branches, brown spines, pink flower, red fruit. Easily grown.....1½ in. S 25c, 2 in. S 35c, 3 in. S 50c
Clusters75c, \$1.00

Neom. fraileana. A non-milky, clustering species with pinkish spines and large pink flowers marked with purple stripes..1½ in. S 25c, 2 in. S 35c, 3 in. S 50c

Neom. gabbii. Our investigations lead us to believe this is a true species not synonymous with *Neom. brandegeei*. It is larger, more globular and bears coarser brown spines.....1 in. S 35c, 2 in. P \$1.00, 2½ in. P \$1.25

Neom. gatesii. (Marcus Jones 1935). Called by the the natives "Corona del Indio" because of the halo formed by the light shining through its spines. Milky, globular with white to brown spines of great length for this group

of plants. It is very scarce in the field and we have found only a few plants on each of our trips.....1 in. S 35c

Neom. marshalliana. (Gates 1934). Named for W. Taylor Marshall, who underwent great hardships on the discovery trip. Milky, biscuit shaped, white spined species. Write us.

Neom. pacifica. (Gates 1934). One of the largest milky Mams in the Peninsula. Brown spined, branches by division of the growing heads. Found on our 1933 expedition. Write us.

Neom. peninsularis. A deep seated, milky plant bearing very few spines on its prominent nipples1½ in. P \$1.00, Grafted \$1.25

Neom. petrophila. The rarest of the old named species as it grows only in one high mountain range. Milky, large headed, brown spined, clustering plant. Only a few grafts at.....\$1.50

Neom. phitauiana. (Baxter 1931). A non-milky, clustered species with soft nearly white spines on tall heads. Only a few RC at.....\$1.00

Opuntia. Found in great abundance and infinite variety throughout Lower California. They are imperfectly known with many interesting types still to be described and named.



Neomammillaria baxteriana

- O. alcahes.** A very pretty cholla bearing numerous white spines of a deceptive soft appearance.....RC 25c
- O. bravoana.** (Baxter 1933). Beautiful smooth green pads bearing white spine clusters. Large yellow flower.....RC 50c
- O. burrageana.** Rather slender branches covered with short yellow to brown spines. Pretty.....RC 25c
- O. cholla.** Tree like, bearing whorls of fat, turgid branches with widely spaced spine clusters. Purple flower, green proliferous fruit.....RC 25c
- O. ciribe.** A cholla with fat, green up curved branches bearing numerous clusters of white spines. Greenish yellow flower, yellow tubercled fruit. Very prettyRC 25c
- O. clavellina.** A striking long jointed cholla with remarkably long spines. Bronze flower.....RC 35c
- O. commondensis.** A flat jointed species with softly pubescent pads and white or yellow spines.....RC 50c
- O. invicta.** The Rats' Nest. Clusters of short, fat heads bearing heavy flat, gray

spines. Yellow flower and fruit. Clustered.....S 25c, 50c

- O. pycnantha.** An interesting species from the wind swept sands of Magdalena Island. Flat joints nearly hidden by reflexed yellow or brown spines....RC 50c
- O. serpentina variety.** An attractive green jointed cholla with brown spines. RC 25c
- O. tesajo.** A rare low bushy, woody plant of the Ramosissima group. Yellow flowersRC 25c
- O. Gates No. 95.** Whiplike branches that clamber up through other bushes. Bears scarlet fruits of the Leptocaulis groupRC 25c
- O. Gates No. 136.** A beautiful new blue padded species from high in the Cape District mountains. Long white spines, maroon fruit.....RC 50c

Pachycereus. Elephant Cereus are the giants among Lower California cactus. They are more slender in youth and much faster growing than the familiar Arizona Giant. As pot plants they form marvelous green, fluted columns of artistic proportions.

P. pecten-aboriginum. The seeds are borne in a chestnut like hull covered with spines. It is said the Indians used portions of these hulls as combs, hence the name. Many consider this the most beautiful of the two species. It is a remarkably fast grower.....1½ in. S 25c

P. pringlei. The larger and hardier of the two. Very easily grown.....2 in. S 25c, 3 in. S 35c, 4 in. S 50c

Pereskiosis of Lower California clamber over small trees in the manner of wild blackberries. They have slender, round woody branches, long slender spines and flat fleshy leaves. They may be grown as vines or pinched back to form compact bushes.

P. gatesii. (Baxter 1932). One of our own discoveries bearing thick, glossy leaves and rose pink fruits.....RC 25c



Neomammillaria capensis

P. porterii. Glossy green leaves, yellow flower, long orange fruit.....RC 25c

Wilcoxia striata. (*Cereus striatus*, *C. diguettii*). Jarramatraca. Very slender branches bearing minute brown spines, purple flowers, red fruit with white spine clusters. Grafted.....\$1.00

Agave or Century plant. One of the crowning glories of Lower California. There are over twenty-five species that are found only in the peninsula. They furnish nectar for the bees, fiber for cordage, are used for road repairs, and supply food for man and beast as well as making one of the world's most powerful distilled drinks. We are able to furnish a few more kinds than are listed.

A. brandegeei. Gray green out curved leaves bordered with contrasting colored, medium sized teeth. Grows to 3 feet. Very good. Plants....50c, 75c, \$1.00

A. connochaetodon. The Gnu Toothed Agave. A little blue beauty that matures under a foot high. Short, thick, triangular leaves edged with curiously twisted large teeth and tipped with a short heavy spine. Strong offsets....50c

A. datylio. Rather slender, dark green, dagger like leaves with small dark teeth. Height to 2½ feet. Plants.....50c, 75c, \$1.00

A. margaritae. The smallest of the group. Very thick triangular green leaves edged with heavy brown teeth. A fine pot plant. Offsets.....50c

A. nelsonii. A gray leaved plant of the Desertii group. Height to 2 feet. Plants.....50c, 75c, \$1.00

A. orcuttiana. A compact plant, with heavy dark green leaves. Height to 3 feet.....4 in. S 25c

A. roseana. A beauty, bearing widely spreading gray green leaves with distantly spaced large teeth and a long spine. Grows to 2½ feet. Offsets.....50c

A. sebastiana. Similar in habit to *A. orcuttiana*.....4 in. S 25c

Dudleya. Native plants quite similar to *Echeverias* (Hen and Chickens) in appearance. The leaves are more pointed, varying greatly in size and color. In California they will flourish in the winter, curl up and rest in the summer. Valuable as rockery and pot plants. Do not like to be planted where rain and fogs will drip on them.

D. albiflora. Clusters of short, thick green leaved rosettes. Very attractive..RC 35c

D. eximia. (Johansen in litt.). One of our discoveries. A green leaved plant that gets as big as a wash tub.....RC 35c

D. Gates No. 337. Rosettes of green pointed leaves.....RC 35c

Hechtia. A clustering Bromiliad from the tip of the peninsula. Gray green with rich silver and red markings. Smaller than *H. texensis*. Plants..25c, 50c, \$1.00

Pedilanthus macrocarpus. A Euphorbia. Clusters of gray green rod like leafless branches springing from the ground. Red flowers. Height to 3 feet.....RC 35c, 50c, 75c

Yucca. A new species apparently related to *Y. whipplei*. Slender gray green leaves from a crown.....S 25c.



Agave margaritae

"The last lot of plants I received from you opened up in good condition and are now all growing."—E. S. G., New Zealand.

GENERAL CACTUS LIST

LARGE GROWING CEREUS

Here we present many varieties of the large cactus from North and South America. They form prominent features of the landscape in many sections. Among them are the great tree cactus and other columnar types. In the mildest sections of our country they will quickly grow into spectacular garden plants. All of them make splendid pot plants as with less root room and feed they grow more slowly.

Acanthocereus honduriensis. A very quick growing large plant. The three to five angled, glossy green branches bear small clusters of short stiff spines. A rarity.....6 in. RC from seedlings 25c

A. pentagonus. A three to six angled bright green plant. White night blooming flower. A favorite in some sections for grafting stocks.....RC 25c, 35c, 50c

Bergerocactus emoryii. See Lower California List.

Carnegia gigantea. The Arizona Giant, Suwarro. One of the largest of the cactus but slow growing.....
.....2 in. S 25c, 12 in. P \$2.00

Cephalocereus. The Old Men Cactus are a beautiful group of columnar types which are very satisfactory as pot plants. Many of them bear hairy spines.

Ceph. chrysacanthus. Yellow Torch Cactus. A magnificent plant with yellow spines and soft hair.....3 in. S 75c

Ceph. cometes. Angular, blue, columnar plant.....3 in. S 25c

Ceph. exerans. Green few ribbed, weak spined, large columnar plant.....
.....5 in. S 50c

Ceph. polylophus. A beautiful yellow spined, many ribbed, large columnar plant.....3 in. S 75c

Ceph. royeri. A fine columnar plant bearing both spines and fine hair on its many ribs.....2 in. S 35c

Ceph. senilis. The famous Old Man Cactus of Mexico. Columnar, bearing long white hair.....
1 1/4 in. S 25c, 3 in. S \$1.00, 4 in. S \$1.50

Cereus Blue Beauty. (Formerly listed as C. Monvilleanus). This is one of the largest and most striking of all cactus. No one has been able to identify it, so we list it under this most fitting name. The large blue branches are edged with clusters of golden yellow spines.....
.....9 in. S 75c, 12 in. S \$1.00

Cereus bolivianus. A large growing, dark green plant, with brown spines.....
.....3 in. S 25c, Monstrosus 3 in. S 35c

Cereus formosus monstrosus. Very interesting with its small knobby, gnarled branches.....2 in. RC or S 35c

Cereus hildemannianus. A large branching blue green plant. Large sweet scented, creamy white, night blooming flower. We recommend this highly because these rooted cuttings will bloom freely every year.....
.....6 in. RC 75c, 12 in. RC \$1.50

Cereus jamacaru. Large blue branches with yellow spines.....3 in. S 25c

Cereus lepidotus. Large blue green columnar plant. Easily grown..3 in. S 25c

Cereus monstrosus. We have a number of beautiful garden hybrids in several monstrous types.....6 in. S 50c,
9 in. S 75c, 12 in. S \$1.00, 18 in. S \$1.50

Cereus peruvianus. Fast, easy growing large cereus, many angled, bluish arms, night blooming white flower. Makes excellent grafting stock.....3 in. S 15c,
5 in. S 25c, Monstrosus 2 1/2 in. S 25c,
5 in. S 35c, larger at various prices.

Cereus stenagonus. A handsome, columnar, branching plant.....3 in. S 25c

Cereus variabilis? A plant of mysterious origin from an old California garden. Heavy, semi-climbing, usually four angled branches.....Strong RC 75c

Cleistocactus baumannii. Forms clumps of branches similar in size and shape to *Nyctocereus serpentinus*. The short closely set spines are golden brown and the small flowers are red.....RC 50c

Cleistocactus herzogianus. A new small, tree like *Cereus* from Bolivia. Yellow spines, red flowers.....3 in. S 35c

Corrycactus melanotrichus. An easily grown new red flowered *Cereus*.....3 in. S 35c

Eriocereus tephraacanthus. Large, white spined branches bearing large white flowers. The latest thing from Bolivia3 in. S 35c

Haageocereus choicensis. The Orange Torch Cactus. Stout columns covered with closely set orange spines. One of the finest new ones.....1½ in. S 35c

Haageocereus pacalaensis. A new beauty from Peru. Forms clusters of upright columns branching from the base, bearing closely set yellow spines.....3 in. RC 35c

Lemaireocereus. A beautiful group of pot plants and magnificent garden varieties from Mexico. The branches of the different species vary greatly in color, number of ribs and spine patterns.

Lem. chichipe. (De Mixteca). Round furrowed branches, powdered blue white.....3 in. S 35c

Lem. griseus. Large, few ribbed, gray branched plants.....3 in. S 35c

Lem. hollianus. (*C. bавosus*). A freely branching large plant, round fluted branches, brown spines.....3 in. S 35c, 3 in. RC 35c

Lem. stellatus. The Star *Cereus*. Beautiful, large columnar branches with the spines arranged in star clusters.....5 in. S 60c

Lem. thurberi. The Pithaya Dulce. A favorite fruit of millions of Mexicans. Many ribbed, brown spined, columnar branches.....1½ in. S ready in May 25c

Lem. weberi. Very large, freely spined, branching plant.....6 in. S 75c

Leptocereus quadracostatus. A rare plant with square branches, white flowers.....RC 50c

Lophocereus Gatesii, Sargentianus, Schottii, Monstrosus. See Lower California List.

Machaerocereus eruca, gummosus. See Lower California List.

Myrtillocactus cochal. See Lower California List.

Myrtillocactus geometrizzans. A highly colored, blue branching plant.....3 in. S 35c, 5 in. S 50c

Oreocereus celsianus. (*Pilocereus*). An Old Man of the Mountains from high in the Andes. A beautiful columnar plant with white, silky hair over highly colored spines.....2½ in. S 35c

Oreocereus trollii. (*Pilocereus*). Another of the Old Men from the Andes. White hair over red spines.....1½ in. S 35c

Pachocereus are some of the largest plants of the cactus world. These beautiful columnar plants may be grown for years in pots.

Pach. chrysomallus. Green, strongly tubercled, yellow spined plant..3 in. S 50c

Pach. marginatus. The Organ Pipe Cactus. The ribbed columnar branches grow in upright clusters resembling an organ's pipes. The edges of the ribs bear very short spines.....3 in. S 35c, 8 in. S 75c

“Thank you most sincerely for the wonderful plants you ship. They are by far the best we have bought any where.”—S. L. B., Milwaukee, Wis.

Pilocereus strausii. (Borzicactus). The Silver Torch Cactus. A beautiful columnar plant covered with soft white spines easily grown.....

.....3 in. RC 35c, 5 in. RC 50c

Rathbunia alamoensis. A round stemmed Cereus bearing pretty scarlet flowers and fruits.....RC 25c

Trichocereus are a fine group of easily grown plants from high elevations in South America. They branch freely from the base and include some of the most magnificent day bloomers.

Trich. bridgesii. Forms clusters of short, green, sparsely spined, columnar branches.....5 in. S 50c

Trich. candicans. Clusters of green columnar branches bearing yellow spines.....2 in. S 25c

Trich. chiloensis. Forms clusters of short thick stems crowned with very large white flowers.....2 in. S 35c

Trich, fascicularis. Green columnar plant with an abundance of white spines.....3 in. 50c

Trich. lamphrochlorus. Forms clusters of short, stout, green branches.....5 to 6 in. P 75c

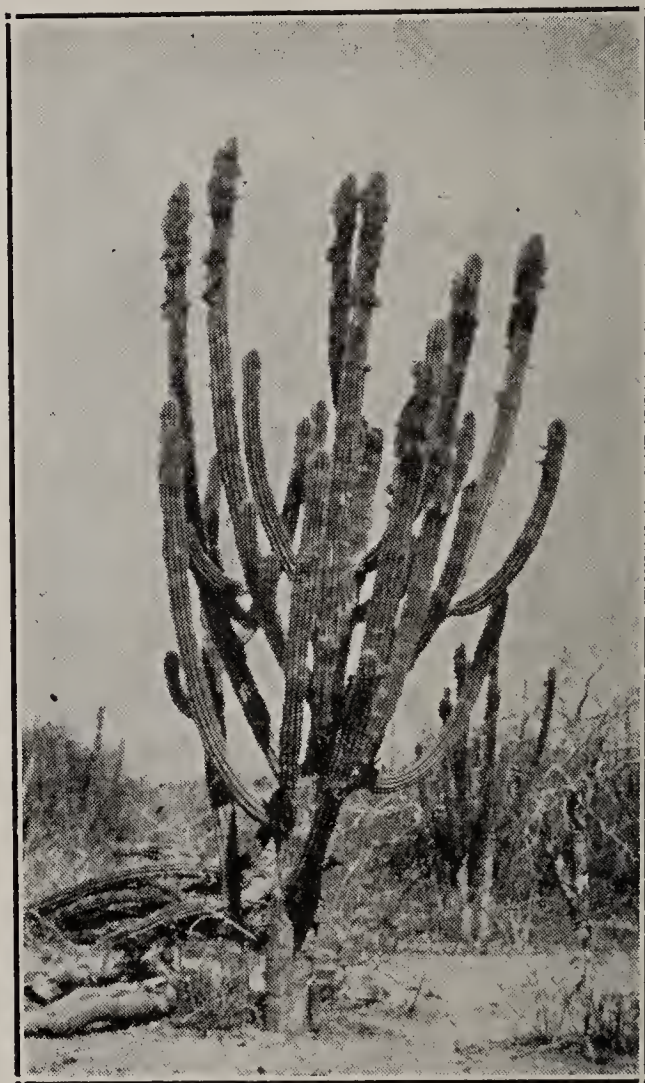
Trich. pachanoi. Rounded ribs, very few, short spines, immense flowers. Rapid, easy grower. Very rare....3 in. RC 50c

Trich. pasacana. Forms clumps of very heavy, strongly spined branches.....2½ in. S 35c, 4 in. S 75c

Trich. schickendantzii. Forms dense clusters of short, stout, fluted branches freely covered with short yellow brown spines. Old clumps are noted for their large numbers of immense day blooming white flowers.....2 in. RC 25c, 4 in. RC 50c. Small clusters 50 to \$1.00

Trich. spachianus. White Torch Cactus. Clusters of tall fluted columns covered with short brown spines. Famous for six inch day blooming flowers. A favorite grafting stock.....2 in. S 25c, 4 in. S 50c

Trich. strigosus. Very short branches, yellow spines, very large white flowers.....2 in. S 75c



Pachycereus pecten-aboriginum

"The plants imported under government permit No. 16620, delivered by you to me today are very satisfactory. Every plant seems O. K. in every particular."—G. G. R., Long Beach, Calif.

"I am very pleased with your stuff and its packing,—which contrasts agreeably with that of most U. S. exporters. I can promise you some business in the spring."—W. S. J., Liverpool, England.

NIGHT BLOOMING CEREUS

Under this heading we are grouping a number of climbing or clambering night blooming cactus. The branches of all, are rather slender and some cling by aerial roots. The white flowers are large, ranging from five to ten inches in width and many are fragrant.

Harrisia bonplandii. A rare species. Sparsely spined, strong branches, large white flower. Excellent grafting stock
.....RC 35c

Harrisia brookii. One of the stouter ones of this group, forms a tree like plant with fluted branches.....12 in RC \$1.00

Harrisia fragrans. Forms clusters of upright branches similar in shape and size to *Nyctocereus serpentinus*. Yellow spines. Pink flower.....3 in. S 35c

Harrisia martini. Round clambering branches with a few spines. Strong and easily grown. A good grafting stock for slender species.....RC 25c

Harrisia tortuosa. Round clambering branches, freely spined, many large flowers, red fruit..1½ in. S 25c, RC 25c

Hylocereus monacanthus. Forrest Cereus. Slender winged branches with undulated margins.....RC 25c

Hylocereus ocamponis. Three angled, blue branches, undulated edges, very large flower. A good plant to grow against a shady wall.....3 in. S 35c, RC 35c

Hylocereus undatus. Queen of the Night. An excellent climbing plant for partly shaded places. Usually three broad, thin angled, spineless ribs with undulated margins. Large flower followed by red fruit.....RC 25c

Monvillea phatnosperma. A rare, slender branched Cereus with large white flowersRC 25c

Nyctocereus serpentinus. The old favorite Queen of the Night. Slender, fluted, columnar branches, fine brown spines, white flower. Good grafting stock.....
.....RC 15c, 25c, 35c

Selenicereus coniflorus. Slender climbing plants bearing white flowers a foot long
.....RC 35c

Sel. donkelaarii. A species with whip like branches bearing clusters of fine spines
.....RC 35c

Sel. honduriensis. One of the rarer ones in this group.....RC 35c

Sel. macdonaldiae. One of the largest flowered of the whole cactus tribe. Slender, nearly square branches..RC 35c

Sel. pteranthus. Princess of the Night. A free bloomer with very large sweet scented flowers.....RC 50c

Sel. spinulosus. Square to pentagonal branches freely supplied with aerial roots. White flower.....RC 25c

Sel. Wegener's hybrid from *Sel. vagans*. An excellent plant for hanging baskets
.....RC 25c

Sel. pteranthus x Harrisia bonplandii. Brassfield's interesting production. A strong growing plant.....RC 25c

Weberocereus panamensis. A winged, gray green branched climber with white flowers. Rare.....RC 50c

NIGHT BLOOMING CEREUS COLLECTION

These plants will give many gigantic, sweet smelling blossoms that open as the shades of night fall. Easily grown in the home.

5 Plants for \$1.00

WILCOXIA COLLECTION

Five kinds of these free blooming beauties. All good grafted plants, \$4.00.

WINDOW GARDEN PICTURES

We wish some good pictures of indoor window cactus gardens, suitable for publication. We will offer plant orders for the best pictures received by October 1, 1935, as follows: First award, \$25.00; Second, \$15.00; Third, \$7.50.

CACTUS PLANT PICTURES

Help us provide good pictures for our next catalogue. Send us prints of your cactus pictures. Next October we will send plant orders as follows: First award, \$10.00; Second, \$7.50; Third, \$5.00. For any others we may wish to keep, \$2.50.

In return for awards under either of the above offers we expect the sole right to copyright and publish such pictures as we may select.

BEGINNER'S COLLECTION

For those who have not had much experience in growing cactus, we offer this big value collection. It is a choice assortment of strong, healthy plants in a wide range of easily grown types that will make the foundation for a fine collection.

25 Plants \$ 5.00

55 Plants 10.00

HOUSE PLANT COLLECTION

A fine assortment of good varieties in various types especially chosen for growing in the house. Includes one grafted Schlumbergia or Zygocactus.

25 Plants \$5.00

SOUTH AMERICAN COLLECTION

A choice collection of 6 fine plants all hailing from south of Panama, \$1.25.

ECHINOCEREUS

Among this group of Hedge Hog Cactus are some of the most satisfactory of our house and garden plants. They nearly all are easily grown and bloom freely with large, colored flowers. They fall into several groups such as the depressed spined, singled headed plants of the Rainbow Cactus type, long spined clusters, short spined clusters and sparsely spined, slender branched clusters.

Ech. species. Crests of an un-identified species bearing very short, red and yellow spines. Grafted.....\$1.25

Ech. barthelowanus. See Lower California List.

Ech. berlandieri. See Ech. pentaplopus.

Ech. blanckii. Clusters of slender, short spined, few angled branches. Large purple flower.....RC 15c, 25c

Ech. bonkerae. A new one of the Engelmannii group. More ribs, shorter spines, deep purple flower. Plants.....50c

Ech. brandegeei. See Lower California List.

Ech. cinerascens. Clusters of green heads bearing short, soft, white spines, purple flower. Rare.....RC 50c

Ech. coccineus. Compact clusters of short, spiny heads, red flower. Small plants25c

Ech. delaetii. Clustered heads that become completely covered with long white hair. Beautiful pink flower.....1½ in. S 35c, Grafted 75c

Ech. ehrenbergii. Forms clusters of small, light green branches bearing soft white spinesRC 25c

- Ech. engelmannii.** Clustering branches with varicolored spines. Large magenta flower. Hardy. Collected plants.....
.....15c, 25c, 35c, 50c up
- Ech. enneacanthus.** Forms clusters of tall, thick, green branches, white spines, purple flower.....RC 25c
- Ech. ferreirae.** See Lower California List.
- Ech. mammillatus.** See Lower California List.
- Ech. maritimus.** See Lower California List.
- Ech. melanocentrus.** A new beauty. Clusters of small, short spined heads bearing one of the most beautiful pink, red centered flowers we know. Plants.....
.....25c, 35c, 50c
- Ech. mojavensis.** The Dill Pickle Cactus. Compact clusters of green heads, curved gray spines, red flower. Hardy. Collected plants.....25c, 35c, 50c
- Ech. octacanthus.** Very compact clusters of small, green heads, straight gray spines, red flower. Hardy. Collected plants.....25c, 35c, 50c
- Ech. pacificus.** See Lower California List.
- Ech. papillosus.** Clusters of small angled heads bearing pretty yellow flowers. Plants.....25c, 35c
- Ech. papillosus var. gigantea.** Much larger branches and flowers. Grow in shade. RC and Plants.....50c to \$1.00
- Ech. pensilis.** See Lower California List.
- Ech. pentalophus.** (Berlandieri). Clusters of slender angled branches, large purple flower.....RC 15c, 25c
- Ech. perbellus.** Compact clusters of short branches bearing varicolored, depressed spines. Pink flowers. Plants.....
.....25c, 35c, 50c. Grafted 75c
- Ech. poselgerianus.** Clusters of slender, angled branches arising from under ground. Purple flower. Rare.....RC 35c
- Ech. reichenbachii.** The Lace Cactus. Clusters of round fat heads, depressed, short varicolored spines, large pink flower. Plants.....15c, 25c, 35c, 50c
- Ech. rigidissimus.** The Rainbow Cactus. Single heads, short, depressed, highly colored spines, very large pink flower. Difficult to grow on its own roots. Plants 25c, 35c, 50c. Grafted 75c, \$1.00
- Ech. rosei.** Clusters of large heads, short spines, scarlet flowers. Hardy. Plants
.....50c, 75c, \$1.00, \$1.25
- Ech. sarissaphorus.** A large clustering species, noted for its extremely long spines. Clear pink flowers. Rare.....
.....1½ in. S 35c
- Ech. sciurus.** See Lower California List.
- Ech. stramineus.** Clusters of long spined, short heads, red flower. Plants.....
.....35c, 50c, 75c, \$1.00
- Ech. viridiflorus.** Dwarf plants of this green flowered beauty.....15c

*Neomammillaria gatesii*

ECHINOCACTUS

Are the larger globular plants of great beauty and interest from the Mexican deserts. The tops of old Echinocactus are covered with mats of felted wool from which emerge the flowers and fruit. Though eventually attaining great size, they grow slowly and may be grown for years in ordinary pots.

Etus. horizonthalonius. The Davil's Head.
Hemispherical, gray green plants with depressed, stiff spines, pink flowers. These must be grown in a coarse soil containing much lime....3 to 4 in. P 50c

Etus. ingens grandis. Globular, gray green large plant. When several inches in

diameter, bright purple markings develop.....1½ in. S 25c, 2 in. S 35c

Etus. grusonii. The Golden Ball Cactus. Globular plants bearing golden spines. The larger the plants, the finer the color.....1½ in. S 25c, 3 in. S 50c

FEROCACTUS

Are the large Barrel Cactus, whose macerated pulp has quenched the thirst and saved the life of many a man. They are globular to cylindric in shape. A fine collection of them may be grown in a small space.

F. acanthodes. (Echinocactus cylindraceus). The large red, yellow or gray spined California Barrel Cactus. Collected plants from.....15c to \$10.00

F. coloratus. See Lower California List.

F. covillei. (Echinocactus emoryii). Globular, noted for prominent tubercles and long, stout, hooked, spines.....1½ in. S 35c

F. crassihamatus. Globular with depressed varicolored spines. Very unusual in that several of the radial spines as well as the central are hooked.....1¼ in. S 35c

F. flavovirens. Globular with yellow spines.....1½ in. S 35c

F. fordii. See Lower California List.

F. glaucescens. (Echinocactus pfeifferii). A globular, yellow spined beauty.....2 in. S 35c

F. gracilis. See Lower California List.

F. hamatacanthus. (Echinocactus longihamatus). The Mexican Candy Cactus. Attractive, dark green plant with gray

hooked spines.....1½ in. S 35c
Larger plants.....\$1, \$1.50, \$2, \$2.50

F. johnsonii. The smallest Ferocactus. Globular to egg shaped with straight, pinkish spines, pink flower. Difficult to grow. Collected plants.....15c, 25c, 35c, 50c

F. latispinus. (Echinocactus corniger). The wide spines of this famous species are only exceeded in width by our new F. coloratus.....1¼ in. S 35c

F. lecontei. Globular plants, yellow or pink spines, many fine radials.....4 in. P \$1.75

F. melocactiformis. (Echinocactus electracanthus). A globular to cylindric plant with curved yellow spines. Easily grown.....3 in. S 75c

F. nobilis. (Echinocactus recurvis). Globular with yellow to red spines.....1½ in. S 35c

F. pringlei. Globular with straight red spines.

F. rectispinus. See Lower California List.

MEXICAN COLLECTION

Mexico, one of the world's greatest cactus districts sent us these interesting beauties. Includes the Old Man. 7 plants for \$1.50.



Ferocactus Tortulospinus

- F. robustus.** A large globular plant, eventually clustering. Straight spined.....
.....1½ in. S 35c

F. tortulospinus. See Lower California List.

F. townsendianus. See Lower California List.

F. uncinatus. The Turk's Head or Cat Claw Cactus. A small, slender barrel cactus with a crown of long hooked spines. Plants.....25c, 35c, 50c, \$1.00

F. viridescens. The low green Nigger Head of the California sea coast. Easily

grown. Collected plants.....
....2 in. 15c, 3 in. 25c, 4 in. 50, 5 in. 75c

F. viridescens var. littoralis. See Lower California List.

F. vizcainensis. See Lower California List.

Homalocephala texensis. (Echinocactus texensis). Hemispherical green plant bearing beautiful pink flowers followed by scarlet fruit. In Texas it is called the Horse Crippler because of its stiff stout spines.....5 in. P \$1.25

“You are in my opinion, a WONDER. After reading your experiences in one of your circulars, I’ve come to the conclusion that you have the disease: Cacticitus in a very virulent form. To fare forth the seventh time on an expedition so hazardous, requires a lot of courage and physical endurance that few people are endowed with.”—P. D. B., Los Angeles, Calif.

“All the plants have arrived and I am very much pleased with them. They are all both in size and quality above expectation in respect to plants one can obtain in the East.”—W. J. C., Elizabeth, N. J.

“I must compliment you on the extreme care you took in packing. At no time have I received plants from any one that were in such fine shape.”—F. S .C., Sacramento, Cal.

SMALL CACTUS

This group includes a large variety of the smaller species especially suitable for growing in the home and other limited spaces. It includes some of the most beautiful and best blossoming kinds.

Ancistrocactus brevihamatus. (Echinocactus). Globular to oblong plants with large fleshy roots, varicolored, hooked spines, rose pink flowers.....
.....2 in. S 35c, 4 in. P 75c

Ancistrocactus scheerii. Similar to A. brevihamatus, but with greenish yellow flower.....3 in. P 50c

Ariocarpus fissuratus. (Anhalonium). The Living Rock. A curious small plant seemingly carved from gray stone in a most intricate pattern. Small pink to white flowers. Plant in coarse gravelly soil containing lime. Water sparingly. Plants.....25c, 35c, 50c

Astrophytums. The Bishop's Hoods as this group of plants is called, are a very intriguing group. They range in size ordinarily to six inches. All bear trumpet shaped yellow flowers at intervals during the summer.

A. asterias. The Sea Urchin Cactus. Smooth, ribless, spineless hemispherical species bearing rows of woolly dots....
1½ in. P 35c, 2 in. 50c, 2½ in. 75c, 3 in. \$1.00.

A. capricornis var. aurea. A heavily ridged species bearing long weak spines.....
.....1 in. S 50c

A. myriostigma. Four to five angled, spineless, dark green plants covered with tiny white dots.....
....1 in. S 50c, 1½ in. S 75c, 2 in. S \$1.00

A. ornatum. Globular plant with deeply cleft, white flecked ribs, bearing short yellow spines. Yellow flower with red throat.....1 in. S 50c, 1½ in. S \$1.00

Bartschelia schumannii. See Lower California List.

Cochemeia poselgeri. See Lower California List.

Coryphantha. A group of conical to oblong plants all bearing short, stiff spines on grooved tubercles and flowering at the apex of the plant. In Europe these are often called Mamillarias.

C. alversonii. The Fox Tail Cactus usually mis-called C. desertii. Oblong, clustering heads covered with short, stiff, white, brown and black spines, pink flowers. Hard to grow. Use coarse limey soil and water sparingly. Collected plants.....15c, 25c, 35c, 50c

C. echinoidea. Small globular plant with depressed brown spines, rose pink flowers.....1 in. S 35c

C. elephantidens. Globular green plant, large flattened tubercles, small, short spines, large pink flowers..1½ in. S 50c

C. erecta. Tall heads bearing star clusters of short yellow spines, large yellow flower.....1½ in. S 25c

C. georgii. Slender, columnar heads of dark green with white spine clusters....
.....1½ in. S 35c

C. macromeris. Long green nipples tipped with long gray spines, large pink flowers. Plants.....25c, 35c

C. neo-mexicana. Globular plant with brown spines, purplish flower. Hardy..
.....1½ in. P 35c

C. pallida. Globular plant, white appressed spines, yellow flower....1½ in. S 25c

C. recurvata. Forms clusters of large globular heads, yellow recurved spines, yellow flower.....1 in. S 25c
Plants.....25c, 50c, 75c, \$1.00

OPUNTIA COLLECTION

An interesting and easily grown group. We will include the famous white haired Grizzly Bear. 5 fine plants for \$1.00.

C. vivapara. Hemispherical plant, light colored spines, pink flower. Very hardy..
..1 in. P 15c, 1½ in. P 25c, 2 in. P 35c

Dolichthole sphaerica. (Mammillaria sphaerica). The Nipple Cactus. Forms clusters of light green, long nipples heads, fragrant, clear yellow flowers. Plant 25c

Echinomastus mcdowellii. (Echinocactus). A globular plant covered with snow white spines.....1½ in. S 35c

Echinopsis multiplex. Clustering globular green plant bearing immense pink, trumpet shaped flowers. This and E. turbinata are two of the best flowering cactus
.....2 in. P 15c, 3 in. P 30, 4 in. P 50c

Echinopsis turbinata. Clustering, short spined, globular plants bearing large white flowers
..... 2 in. P 15c, 3 in. P 30c, 4 in. P 50c

Epithelantha micromeris. The Golf Ball or Button Cactus. Covered with a network of fine white spines. Very small pink flower followed by tiny scarlet fruit. Plants.....15c

Escobaria runyonii. Clusters of very small, round, spiny heads. Plants....25c

Hamatocactus setispina. Globular, small, green plant freely bearing yellow flowers all summer. Red fruit..1½ in. S 25c
Plants.....35c, 50c, 75c

Lophophora williamsii. (Anhalonium). The Peyote, Mescal Button, Dry Whiskey. Carrot rooted, blue green, spineless plant with small pink flowers. Contains an intoxicating drug for which reason it is eaten in Indian ceremonies. Plants.....25c, 35c, 50c

Neobesseya similis. Small clustering plant resembling a Coryphantha. Champagne colored flowers with long pointed petals followed by red fruit. Plants.....
.....15c, 25c, 35c. Grafted 75c

Neolloydia texensis. Small, cylindric, spiny heads bearing pink flowers. Plants.....25c, 35c, 50c

Neomammillaria. (Mammillaria). Dump-ling Cactus, Fish Hook Cactus, Pin Cushion Cactus. This is one of the most numerous and desirable groups. Relatively they are all small plants. Some are globular and single headed, while others are tall and much branched. A large group of straight spined ones has milky juice. There is a great variety in spine patterns and colorings. Usually the flowers are small, though this deficiency is often overcome by brilliant colorings. Several months after flowering most kinds bear brilliant red fruits that hang on for weeks. They grow readily in pots and owing to their small size a great many may be grown in a small window garden. This group prefers a slight shade to the open sun.

Neom. arida. See Lower California List.

Neom. armillata. See Lower California List.

Neom. baxteriana. See Lower California List.

Neom. blossfeldiana. See Lower California List.

Neom. bocasana. One of the easiest to grow and very beautiful. Round heads bear both hooked spines and long silky, white hair.....1½ in. S 35c

Neom. brandegeei. See Lower California List.

Neom. bullardiana. See Lower California List.

Neom. camptotricha. Forms clusters, long green tubercles, curling, hair like yellow to brown spines, white flower.....
.....1½ RC 25c

Neomam. capensis. See Lower California List.

“My order of cacti arrived today. Every plant is in excellent condition. The Neom. capensis, your own find, is a little beauty.”—R. H. W., Berwyn, Pa.



*Howard E. Gates
In Lower California, Mexico*

Neom. compressa. A hemispherical, clustering plant bearing short, fat tubercles with woolly axils. Ruby red flowers....
.....1 in. S 25c

Neom. decipiens. Forms dense clusters of deep green heads, reddish brown spines, cream flowers.....1 in. RC 35c

Neom. dioica. Forms clusters of gray green round heads, reddish brown spines, cream flower. Collected plants
.....15c, 25c, 35c, 50c

Neom. echinaria. Clusters of tall heads covered with straight yellow spines. Very pretty.....1½ in. RC 25c

Neom. elongata var. stella aurata. The Golden Star Cactus. Freely clustering slender headed plant bearing star shaped clusters of depressed yellow spines, yellow flowers
.....1 in. RC 15c, 2 in. RC 25c
Clusters35c, 50c

Neom. fragilis. The Thimble Cactus. Clusters of small round heads bearing depressed white spines.....1 in. RC 15c

Neom. fraileana. See Lower California List.

Neom. gabbii. See Lower California List.

Neom. gatesii. See Lower California List.

Neom. hahniana. The Old Woman Cactus. Round heads densely covered with long white hair.....1 in. S 25c

Neom. heyderi. Hemispherical green plant bearing cream flowers followed by red fruit.....1½ in. S 25c

Neom. klissingiana. A globular milky plant densely covered with short white spines. Red flowers.....1½ in. S 50c

Neom. longicoma. Forms clusters of globular heads bearing white hair and hooked brown spines.....
.....1½ in. S 35c, 2 in. S 50c

Neom. magnimama. Hemispherical, milky plant bearing very large heavy tubercles, cream flower.....1½ in. S 35c

Neom. marshalliana. See Lower California List.

Neom. multiceps. A tiny clustered kind with little brown spines.....RC 15c

Neom. mystax. Milky, globular green plant, creamy spines, red flower and fruit.....1 in. S 25c

Neom. pacifica. See Lower California List.

Neom. painteri. Clusters of small heads with short brown hooked spines.....
.....1 in. S 35c. Grafted crests \$1.25

Neom. parkinsonii. A pretty globular plant bearing short light colored spines
.....1 in. S 25c

Neom. peninsularis. See Lower California List.

Neom. petrophila. See Lower California List.

Neom. pfeifferii. Globular with golden yellow spines.....1½ in. S 50c

Neom. phitauiana. See Lower California List.

- Neom. pottsii.** (*Mammillaria leona*). Tall heads, short white spines.....3 in. P 25c
- Neom. saetigera.** A new, globular, milky plant bearing short white spines.....
.....1 in. S 35c
- Neom. wagneriana.** A new globular milky species that is remarkable for its very long dark central spines....1½ in. S 35c
- Neom. wildii.** Forms clusters of globular heads, white and yellow spines, many white flowers.....1 in. RC 35c
Grafted crests.....\$1.25
- Porfiria schwartzii.** A rare little plant of the *Mammillaria* group. Heavy carrot root with only a green crown decked with tiny white spine clusters showing
.....1 in. P \$1.50

- Phellosperma tetrancistra.** Clusters, white spines intermixed with dark hooked ones, large pink flower. The West's most beautiful *Mammillaria* but very hard to grow. Plant in coarse limey soil and water sparingly. Plants.....
.....25c, 35c, 50c, 75c
- Rebutia miniscula.** Forms clusters of globular, deep green heads with short depressed nearly white spines, beautiful scarlet flowers. Grafted plants.....75c
- Thelocactus bicolor.** (*Echinocactus*). Conical, stiffly spined heads, pink flower with orange throat.....
.....1½ in. S 25c, 3 in. P 50c
- Thelocactus hexadrophorus.** (*Echinocactus*). Globular heads, small depressed spines, purplish flowers.....3 in. P \$2.00

MISCELLANEOUS CACTUS

- Aporocactus flagelliformis.** The Rat Tail Cactus. Many long slender trailing branches covered with short brown spines. Produces an abundance of beautiful pink flowers.....RC 15c, P 35c
Grafted75c
- Chamaecereus sylvestrii.** The Peanut Cactus from its short plump branches which form compact clusters and produce an amazing number of scarlet flowers. Plants.....15c, 25c, 35c
- Epiphyllum.** These plants are often called *Phyllocactus*. They are native to moist forests where they grow on tree trunks like orchids. They like a soil rich in humus, plenty of water and shade. They may be grown with ferns and begonias. The branches of most kinds are blade like with notched edges. The flowers are large and very beautiful. They are mostly day bloomers.



Ferocactus coloratus

FLOWERING CACTUS COLLECTION

An assortment selected because of their wonderful flowers. Get one of these and you will be a cactus fan for life. Such beauties as *Echinopsis*, *Chamaecereus* and *Echinocereus*. No night bloomers.

12 Plants, all for \$2.50

- E. ackermannii*. Brilliant crimson flowers from four to six inches wide.....RC 35c
- E. anguliger*. Very interesting because of the great depth of the notches on its spineless edges. White flower....RC 35c
- E. cooperii*. Creamy white flower..RC 35c
- E. crenatum*. Flat spineless branches. Creamy white flower.....RC 35c
- E. German Empress*. Flat, green, spineless drooping branches bearing numerous medium sized flowers of a beautiful clear pink.....RC 35c. Grafted 75c
- E. peacockii*. Triangular branches, brilliant red flower.....RC 35c
- E. pittieri*. Flat branches, white flowerRC 35c
- E. speciosum*. Triangular branches bearing marvelous iridescent red flowersRC 35c
- E. stenopetalum*. Flat branches, white flower.....RC 35c
- Heliocereus schrankii*. Sun Cereus. Triangular, gray green branches with hardened edges, red flower. A climberRC 50c
- Heliocereus speciosus*. Sun Cereus. Produces an abundance of triangular branches on whose notched margins enormous iridescent red blossoms are borneRC 35c
- Peniocereus greggii*. Arizona's Queen of the Night. Sugar Beet Cactus. Slender, angled branches grow from an immense tuber shaped like a sugar beet. The large white, night blooming flower is followed by a cigar shaped red fruit3 in. S 35c
- Pereskia pereskia*. The Orange Leaf Cactus. Called by evolutionists, "The Mother of Cactus." A slender, wiry branched climbing cactus bearing hooked thorns and large, persistent, glossy green leaves. Pale pink flowers. A favorite grafting stock.....RC 25c. Plants 50c

Schlumbergia gaertneri. The Easter Cactus. The drooping, flat segmented branches carry an abundance of bright scarlet flowers in the spring time. Grows best in partial shade. Grafted on 10 and 12 inch standards....75c, \$1.00

Schlumbergia russelliana. A Christmas Cactus. The drooping branches of this plant are nearly hidden by pink flowers in the winter. Give it some shade.....RC 15c, P 25c

Zygocactus salmonium. Crabs' Claw Cactus. Drooping, flat segmented branches that bear numerous salmon pink flowers in the fall. Grow in partial shade. Grafted on 10 to 12 inch standards....75c, \$1.00

Wilcoxia. The Lead Pencil Cactus so-called from the long slender branches. These plants have clusters of tubers like those of Dahlias. They grow poorly on their own roots but grow vigorously when grafted. Grafted plants should be severely cut back several times to force the formation of many branches. All like some shade as they naturally grow up through other bushes.

W. australis. A rare new species from Sonora. Slender very fine spined branches, magnificent light pink flower with golden yellow stamens spirally coiled around the green pistil. Grafted\$1.25

W. poselgeri. (*Cereus tuberosa*). The Dahlia Cactus. Slender branches covered with short gray to brown interlaced spines. Beautiful pink flowers. Grafted.....50c, 75c, \$1.25

W. senilis. (*W. schmollii*). A very striking new species. The slender branches are covered with soft white hair. Grafted75c

W. striata. See Lower California List.

W. viperina. (*Cereus viperinus*). Very slender, minutely spined branches, red flower. Small plants.....50c Grafted\$1.00



Ferocactus gracilis



Opuntia alcahes trimmed to show
branches growing from fruit



Pereskopsis gatesii

THE OPUNTIA TRIBE

Opuntias form a large section of the Cactus Family. They are usually large and quick growing. Some have flat pads or joints. This type is called "Prickly Pear," "Tuna" or "Platyopuntia." Tree-like types with round cylindric branches are called "Chollas" (Choy-yahs), "Jumping Cactus" and "Cane Cactus." There are minor groups of creeping, clustered and small, woody, branching types.

Grusonia hamiltoniae. See Lower California List.

Grusonia rosarica. See Lower California List.

Grusonia santa maria. See Lower California List.

Nopalea dejecta. Erect plant with large, drooping green pads bearing long white spines.....RC 25c

Nopalea cochinilifera. Erect plants with large smooth, spineless pads. In the Canary Islands Cochineal bugs are grown on these plants. The bugs are picked off and crushed to make the scarlet coloring matter for lip sticksRC 25c

Opuntia alcahes. See Lower California List.

O. arbuscula. Compact, bushy plant with round slender branches.....RC 15c

O. aurea. (Baxter 1933). A new hardy species from Southern Utah. A small plant of the Basilaris group bearing no spines, yellow glochids and yellow flowersRC 25c

O. basilaris. The Beaver Tail Cactus. Rose Tuna. Smooth, purplish, clustered pads, very fine, short glochids, no spines, beautiful, large, magenta pink flower. Hardy.....RC 15c

O. bravoana. See Lower California List.

- O. braziliensis*. Forms tree shaped plants bearing glossy green pads, yellow flowers. Fine pot or tub plant....RC 15c, 25c
- O. burrageana*. See Lower California List.
- O. cholla*. See Lower California List.
- O. ciribe*. See Lower California List.
- O. clavellina*. See Lower California List.
- O. commonduensis*. See Lower California List.
- O. cylindrica*. Plump, round, green branches, red flower, green fruit.....RC 25c
- O. decumbens*. Small plants, smooth green pads with scattered areoles of yellow glochids bordered by white wool and surrounded by a purple spot. Very attractive.....RC 35c
- O. elata elongata*. The Orange Tuna. A small plant with flat, spineless pads, many orange flowers.....RC 25c
- O. grandiflora*. Small, round pads, brown bristles, few white spines, very large yellow, red centered flower.....RC 25c
- O. invicta*. See Lower California List.
- O. leptocaulis*. Minature tree with many small branches bearing rose pink fruits.....RC 15c
- O. macrocalyx*. Small, light green, spineless pads bearing white glochids, yellow flowers, red fruit.....RC 25c
- O. microdasys*. The Kid Glove Cactus. Small pads densely covered with fine yellow glochids. One of the prettiest.....RC 15c, 25c
- O. minima*. The white flowered *Opuntia basilaris*. Smaller and daintier than the pink flowered.....RC 25c
- O. monacantha variegata*. Thin flat pads beautifully variegated in white, green, pink and yellow.....RC 15c, 25c, 35c
- O. opuntia*. Small round, smooth pads, large yellow flower. Hardy.....RC 25c
- O. pycnantha*. See Lower California List.
- O. ramosissima*. Small, woody, branching plants. Plants.....35c
- O. rodantha*. A hardy plant of the *Basilaris* group from high on the north rim of the Grand Canyon. Joints springing from the base bear long spines and pretty pink flowers.....RC 25c
- O. rufida*. The Red Kid Glove Cactus. Thin pads freely bearing clusters of red glochids.....RC 25c
- O. salmiana*. Fine species from South America. Slender, round, tapering branches, often reddish colored, bearing yellow flower followed by persistent red fruits.....RC 25c
- O. santa rita*. Round, blue pads, sparsely spined, yellow flowers. Hardy....RC 35c
- O. serpentina*. See Lower California List.
- O. spinosior*. An attractive, short spined tree cholla. Purple flower....RC 15c, 25c
- O. subulata*. Large tree shaped, branching plant bearing persistent long leaves.....RC 25c, 35c
- O. tesajo*. See Lower California List.
- O. treleasii*. One of the *Basilaris* group bearing clusters of bristles.....RC 25c
- O. ursina*. The Grizzly Bear Cactus. The flat pads bear long, hairy, white spines. Very hardy.....RC 25c, 35c
- O. species*. A new one from Sonora. Has slender, round green branches bearing spines and quite persistent, long, round leaves. Very scarce.....RC 35c
- Pereskiopsis chapistle*. Heavy caned plant, large laves, semi-climbing variety. Attractive.....RC 35c
- Pereskiopsis gatesii*. See Lower California List.
- Pereskiopsis porterii*. See Lower California List.

HARDY CACTUS PLANTS

These plants grow naturally where the winters are very cold. We cannot promise success with them in any given locality owing to various soil and moisture conditions. They are worth trying where hardy plants are desired.

Echinocereus coccineus	Coryphantha vivapara
“ engelmannii	Neobesseya similis
“ mojavensis	Neomammillaria microcarpa
“ octacanthus	Opuntia aurea
“ perbellus	“ basilaris
“ rigidissimus	“ minima
“ rosei	“ opuntia
“ viridiflorus	“ rodantha
Ferocactus acanthodes	“ santa rita
“ johnsonii	“ spinosior
Coryphantha neo-mexicana	“ ursina

MISCELLANEOUS SUCCULENT PLANTS

Agave del monte. Beautiful, dwarf, green plant, slightly variegated leaves, thread-ed margins.....5 in. P 50c	Euphorbia cereaformis. The Corn Cob Euphorbia. Forms compact clusters of fat, cob like branches.....3 in. P 35c
Agave nicholsiae. A small variegated Mexican plant.....2½ in. S 25c	Euphorbia mammillatus. Fat, ridged, club like branches.....5 in. P 35c
Agave toumeyii. A dwarf variegated variety from Arizona. New. Hardy.....3 in. P 25c	Gasteria retata. The Harts' Tongue. Fleshy, smooth, speckled leaves.....Small P 25c, Specimen P \$1.00
Agave utahensis. A dwarf gray green variety, with a long, wavy terminal spine. Hardy.....5 in. P 35c	Hechtia texensis. Long, thin, recurved, gray green leaves bearing teeth on the edges.....Small P 25c
Aloe variegata. The Partridge Breast Aloe. Small, stiff, angular leaves marked by horizontal bars of green and white.....2 in. P 35c	Kleinia articulata. The Candle Plant. Bears a whorl of green leaves at the top of its candle like joints.....RC 15c
Dyckia sulphurea. Forms rosettes of re-curved, glossy green leaves bearing marginal teeth, tall spines of yellow flowers. Strong plants.....25c	Styllophyllum virens. Rosettes of deep green leaves. Native to San Clemente Island, California. Good rockery plant. Plants35c

“I am glad to inform you that all the plants arrived at me in perfect condition. Many thanks for your care in packing and forwarding.”—K. K., Japan.

“I am very glad to inform you that I have duly received Ferocactus you sent last and the seedlings were all finer than I expected for which I express my hearty thanks.”—M. Y., Japan.

“Rec’d the box of plants O. K., and they are sure dandies. Thank you very much.”—M. S., Booker, Texas.

CACTUS CULTURE

Cactus are native to nearly every portion of the American Continents from Canada to Patagonia. They reach their greatest luxuriance in the tropical and semi-tropical regions. They grow under every conceivable condition from the marshes of the seacoast to the driest of the upland deserts. For these reasons any brief outline of growing instructions can only be approximate. Apparently the greatest error is being made in considering that they all need extremely arid conditions. Many of our most desirable species pass at least a portion of their life in the shelter of a bush or the shadow of a rock.

Most kinds like considerable light but this can be broken by shadows during a part of the day. In the home, a south window screened by a lace curtain is preferable to an unscreened north window. Out of doors, the south or west exposures are best and a few hours daily of shadow from neighboring trees or buildings will not be harmful.

The type of soil is one of the most important things. It should be what nursery-men call "a well drained soil." That is one that will not pack hard nor stay muddy. It should be rather coarse, composed of gravel, sand, soil and old leaf mould. If the mixture is not known to carry considerable lime, some lime should be added until the soil has a slightly alkaline reaction as shown by the coloring of litmus paper. This lime can be added in the form of ground limestone, powdered shells, crushed mortar, air-slaked lime or some other form of agricultural lime. No set rules can be given for the proportions of sand, soil and leaf mould as these elements vary so much in their characteristics. When the natural terrain is low and apt to hold moisture, the cactus beds should be mounded to provide good drainage.

When new plants are received, all dried out and broken roots should be cut off as these will rot and may cause a decay to enter the body of the plant. Most cactus are very shallowly seated in the soil and care should be taken when replanting not to set them deeper. To set them deeper will injure the appearance of the plants and may cause rot to start. The base of the plants must be kept well drained. If there is danger in this respect, a little sand, gravel or charcoal may be placed under the base of the plants.

When planting in pots, first cover the drainage hole with a piece of broken flower pot or a few small stones, then place a little sand or gravel to insure constant drainage and then add the soil. If the plants are bare rooted, spread the roots apart so they will be evenly distributed through the soil. When repotting from one pot to another, remove the top soil above the roots and the old drainage material from below. Plants may be easily removed from the pots by upturning a pot with the right hand, tapping the edge down onto something hard and the plant with ball of earth will slide out of the pot into the left hand. Cutting around inside the pot with a knife injures the roots and breaking the pot is wasteful. Pots under six inches in diameter are very hard to keep properly moistened in warm weather. These may be buried in sand or gravel to conserve the moisture. Pots should be chosen to balance the size of the plants. Too large pots are as harmful as too small pots.

When tender plants are grown out of doors during the summer, they may be dug up and planted in pots for wintering indoors. Some people plunge the potted plants in the outdoor beds during the summer and take them in during the winter. Plants may be wintered in a cellar with little light, provided they are dried off enough to stop growth before being brought in and they are kept dry during the winter. Care should be taken to see that the plants are free from pests before storing as these will multiply during the winter.

When grown as house plants, many kinds will grow continuously as long as proper conditions of heat, light and moisture are maintained. Most kinds require considerable

heat for rapid growth. Some kinds will blossom during the winter while the snow is lying on the ground outside. In the house or green house plants may be purchased and started at any time except during long seasons of dark weather. In the garden usually, early spring planting is best.

Watering is something that no set rules can be given for. The closest to a set rule that can be given is to water well whenever the soil gets nearly dry and do not repeat until it is nearly dry again. This may mean twice a day or not for several weeks. Growing plants need much more water than resting ones.

Plants in porous pots dry out much faster than plants in the ground and small pots faster than large ones. A playful sprinkling does no good. Give them plenty at a time. The most difficult time is when plants are first planted. Then there is great danger in over watering until the plants have taken root and started to grow. However, a little moisture is necessary to induce root growth. When plants are resting, slacken off on the water supply. The spines should be wet only enough to keep the dust washed off as frequent moistening will ruin the brilliant spine colors.

A properly made soil mixture should feed the plants for a year without additional fertilizer. In the garden, most any form of fertilizer is good. For potted plants, many have had excellent success with Pokon. This may be instantly dissolved in water and applied to the potted plants without any muss, fuss or odor. It is best to use it weaker and more frequently than the directions indicate.

We are great believers in the superiority of seedling or nursery grown plants over collected plants. They are more nearly perfect and will grow much more readily than collected plants. Then, too, though it seems strange, many of our native collected species are some of the hardest to grow.

Many types that are difficult to grow on their own roots do magnificently when grafted. A great many of the smaller and weaker types grow much larger when grafted on strong species. Grafting is often done for speed in propagation, as many plants that do not branch freely, produce an abundance of branches for cuttings or grafting when grafted. It is one of the best methods of propagating cristates. Trailing types such as the Rat Tail and Christmas Cactus are more beautiful when grafted on standards.

The majority of cactus are tender to frosts reaching below 25 degrees Fahrenheit. We list in another place, a number of hardy kinds that naturally grow where it gets very cold. We cannot guarantee success with them owing to the changed conditions of soil, moisture and other elements. We believe, however, that by planting on mounded beds in the early spring plants will be well rooted by fall, and many will winter successfully if covered in the autumn. For covering, we suggest, first a layer of leaves or dry straw, then a waterproof covering such as tar paper to turn the rain and then top off with another layer of mulch.

Every gardener of any class of plants soon gets acquainted with a host of pests. Cactus are sometimes bothered with one called "the garden or root knot nematode." This is a microscopic worm from the tropics. It burrows into the roots and lives off the juices of the plant. At the points of infestation, the roots swell into knots which eventually rot. When this pest is found, wash off the roots with a strong spray of water, cut them off at the base of the plant, dry the cut surface for a few days and re-root in a box of sand set in a warm place. Be sure to burn up the infested roots. This pest is prevalent in the gardens in the milder portions of our country and in green houses everywhere. It is claimed that severe winter freezing kills it off in the northern gardens. In mild climates, great care must be taken to secure un-infested potting soil. If all available soil is suspected, sterilize by heating to 130 degrees or more and holding at this temperature for an hour. Small lots of soil may be treated by baking in an oven.

Another method is to mix with water in an old wash tub and heat over a fire. This mixture should be frequently stirred while heating.

There are several borers, mostly larvae of moths, who tunnel through cactus plants. The presence of these is indicated by fine droppings resembling corn meal on the surface of the plants. The borers should be ruthlessly dug out or they may be removed by putting quicksilver into the hole with a medicine dropper. The quicksilver will force the worm out immediately, after which the quicksilver should be drained out. All cuts should be allowed to dry well. Many people dust fresh cuts with charcoal or sulphur.

Scale are small flat insects that attach themselves to the skin of the plant and suck out the sap. The ones usually infesting cactus are gray in color. Mealy bugs are a group of mobile insects covered with white fuzz. Both may be removed from plants with a strong, fine spray of water. Keep it moving to prevent injury to the plants. After this treatment, spray under pressure with one of the following preparations:

1. Whale (Fish) Oil Soap one pound, Black Leaf 40 two ounces, water five gallons.
2. One of the mineral oil garden sprays such as Volck added to the above to form a somewhat weaker solution than the accompanying directions prescribe for ordinary garden use. These mineral oils are apt to "burn" the surface of the plants if used stronger. The soil in the pots should be quite moist to reduce the danger of injury.

We do not recommend spraying with alcohol as it will burn many plants and if used constantly will ruin the spines.

One of the most common pests is called the "spine mealy bug" because of the white masses found on the spines; these are not the bugs but egg masses. The bug is a naked, mobile insect that spends most of his time in the crevices or under the plants. This makes them hard to reach by ordinary spraying.

Another mean one is the "root mealy bug" which lives on the roots and is seldom suspected unless ants are seen burrowing under the plant. An effective cure for these last two is to mix up three ounces of Black Leaf 40 to five gallons of water without soap or oil and fill up the pots just before spraying with the other mixtures.

A number of sprays with Pyrethrin or Rotenone bases are on the market. These are quite effective on all the above except the scales, which require a coating of oil to kill. All treatments should be repeated several times at intervals of ten days to two weeks as there are eggs and stray insects that will escape the earlier treatments.

It is much easier to keep the plants from getting infested than it is to clean up a bad infestation. Ants should be poisoned as they help to spread the harmful insects.

THE OPUNTIA BOOK

Volume One of the Cactus and Succulent Society of America's reprint of "Cactaceae" by the late Messrs. Britton & Rose is now bound and ready for distribution. This exhaustive and authoritative work covers the Pereskias, Pereskopsis and Opuntias. It gives the names, synonyms, description and many notes on the various species as well as a multitude of handsome illustrations. There are only a hundred copies to be sold. They will soon be gone. Order now from us. The price is \$10.00 post paid.

DESERT PLANT LIFE MAGAZINE

This is a snappy, informal monthly magazine, well illustrated, telling of the desert and its plant life. It fills a niche that no other publication fills. It will interest you. It is published by The Desert Publishing Co. at \$1.50 per year and we would be delighted to handle your subscription order.

THE CAT'S OUT OF THE BAG

We are working on a little book on Cactus and its culture designed for the ordinary person. We want to give him an idea of what this big cactus family is, how to grow its various members, how to cure their ills and when its all done sell it for a price so low no one will have to go without lunch to buy it. We would be delighted if our friends would lay down a barrage of post cards telling us just what they would like to see in it. Probably we can't use all the ideas but we know some of them will help us to help you.

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Precious little gems suitable for that south window garden. Mammillarias, Coryphanthas and such like. Get one and be happy.

6 Plants for	\$1.25	13 Cactus beauties	2.50	27 Little gems	5.00
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6 Plants for	\$1.25
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DO YOU BELONG TO A CACTUS CLUB?

A great many people in various places are finding great pleasure and profit in Cactus and Succulent Clubs. Most of these clubs have monthly meetings. In the winter, they gather in a home or a hall and listen to some good speaker tell of his experiences in growing plants or his travels in their native homes. Sometimes the talks are illustrated with lantern slides. In warmer weather, meetings are held in member's gardens or visits are made to some notable collection that is ordinarily not open to the public.

It is surprising to note the number of pleasant friendships that are formed and the great amount of information that is exchanged at these meetings.

If there is no club in your vicinity, why not start one? It only takes from ten to twenty persons to form the nucleus of a live club. On our mailing lists are the names of thousands of interested persons. Nearly every large center is represented by enough names to form a fine club. To any one who will undertake to form a club, we offer to search our files and furnish him with a list of names from his locality. The Corresponding Secretary of the Cactus and Succulent Society of America will also furnish much information in regard to organizing.

The greatest benefit is derived by clubs that are affiliated with the Cactus and Succulent Society of America. This large organization provides a medium for the co-ordinating of efforts in all lines pertaining to the dissemination of knowledge and the preservation and cultivation of this interesting group of plants. Through it, enthusiasts in all parts of the world are kept in constant contact. One of its chief works is the publication of the Cactus and Succulent Journal. The contents of the Journal cover a wide range of pertinent subjects with many illustrations. A section each month is devoted to the reprinting of "Cactaceae" by Britton & Rose. This authoritative work has been out of print for several years and is now so scarce that fabulous prices are paid for copies. Members of the Cactus and Succulent Society of America are receiving the reprinted work for only a fraction of its original price.

The membership fee of the Cactus and Succulent Society of America is \$3.00 per year, including the Journal subscription. Only five members of a local club are required to be members of the Cactus and Succulent Society of America to enable the local club to affiliate and a portion of their fees is returned for the support of the local club. For further information, write to the Corresponding Secretary, Cactus and Succulent Society of America, 6162 North Figueroa Street, Los Angeles, California.

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INDEX

	Page		Page
Acanthocereus	10	Jumping cactus	23
Agave	9, 25	Kid glove cactus.....	24
Ancistrocactus	18	Kleinia	25
Anhalonium	18, 19	Lace cactus	15
Aporocactus	21	Lead pencil cactus.....	22
Ariocarpus	18	Lemaireocereus	11
Arizona giant	10	Leptocereus	11
Astrophytum	18	Lophocereus	5, 6
Barrel Cactus	16	Lophophora	19
Bartschelia	3	Lower California cactus.....	2-9
Beaver tail cactus.....	23	Machaerocereus	6
Bergerocactus	3	Mammillaria.....	6, 7, 19-21
Bishop's hood	18	Mescal button	19
Books	28, 29	Mexican trip announcement.....	32
Borzicactus	12	Miscellaneous cactus	21, 22
Britton & Rose Books.....	28, 29	Monstrous cactus	6, 10
Button cactus	19	Monvillea	13
Cactus books	28, 29	Myrtillocactus	6, 11
Cactus clubs	29	Neobesseya	19
Cactus collection offers.....		Neolloydia	19
.....4, 5, 13, 14, 16, 18, 21, 29, 32		Neomammillaria.....	6, 7, 19-21
Cactus culture	26-28	Niggerhead	17
Cactus and Succulent Journal.....	29	Night blooming cactus.....	13
Cactus and Succulent Society.....	29	Nipple cactus	19
Canadian deliveries	2	Nopalea	23
Candy cactus	16	Nyctocereus	13
Carnegia	10	Old man cactus.....	10, 11
Cephalocereus	10	Old woman cactus	20
Cereus	10, 11	Opuntia.....	7, 8, 23, 24
Chamaecereus	21	Opuntia book	28
Cholla	8, 23	Orange leaf cactus.....	22
Christmas cactus.....	22	Orange torch cactus.....	11
Cleistocactus	11	Oreocereus	11
Climbing cactus.....	8, 9, 13, 22, 24	Organ pipe cactus.....	11
Cochemeia	3	Pachycereus	8, 11
Collections.....	4, 5, 13, 14, 16, 18, 21, 29, 32	Peanut cactus	21
Corrycactus	11	Pedilanthus	9
Coryphantha	18	Peniocereus	22
Crab's claw cactus.....	22	Pereskia	22
Creeping devil cactus.....	6	Pereskiopsis	8, 9, 24
Cylindropuntias.....	7, 8, 23, 24	Peyote button	9
Deliveries	2	Phellosperma	21
Desert Plant Life Magazine.....	28	Phyllocactus	21
Devil's cactus	6	Picture offers	14
Dolichthole	19	Pilocereus	12
Dudleya	9	Pin cushion cactus.....	19
Dumpling cactus	19	Pithaya agria	6
Dyckia	25	Pithaya dulce	11
Easter cactus	22	POKON	31
Echinocactus	16	Porfiria	21
Echinocereus.....	3, 4, 14, 15	Prickly pear	23
Echinomastus	19	Princess of the night.....	13
Echinopsis	19	Queen of the night.....	13
Epiphyllum	21, 22	Rainbow cactus	15
Epithelantha	19	Rathbunia	12
Eriocereus	11	Rat's nest cactus.....	8
Escobaria	19	Rat tail cactus.....	21
Euphorbia	22	Rebutia	21
Ferocactus.....	4, 5, 16, 17	Red kid glove cactus.....	24
Fishhook cactus	19	Schlumbergia	22
Foreign deliveries	2	Sea urchin cactus.....	18
Forest cactus	13	Selenicereus	13
Gasteria	25	Silver torch cactus.....	12
General cactus list.....	10-25	Small cactus	18-21
Giant cactus.....	8, 10, 11	Star cereus	11
Golden ball cactus.....	16	Stylophyllum	25
Golden star cactus.....	20	Succulent book	29
Golf ball cactus.....	19	Sugar beet cactus.....	22
Grizzly bear cactus.....	24	Sun cereus	22
Grusonia	5	Suwarro	10
Haageocereus	11	Terms	2
Hamatocactus	19	Thimble cactus	20
Hardy cactus	25	Thelocactus	21
Harrisia	13	Totem pole cactus.....	6
Hat pin cactus.....	4	Trichocereus	12
Hechtia	9, 25	Tuna cactus	23
Hedge hog cactus.....	14	Warranty	2
Heliocereus	22	Weberocereus	13
Homalocephala	17	White torch cactus.....	12
Hylocereus	13	Wilcoxia	9, 22
Jarramatraca	9	Yucca	9
		Zygocactus	22

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From Pomona, Ontario, Covina, etc., Brea Canyon road through Brea and Fullerton to Anaheim.

From San Bernardino, Redlands, Riverside via Santa Ana Canyon Highway to Olive, right to Anaheim.

OUR NEXT MEXICAN COLLECTING TRIP

A trip is planned for May, 1935. We expect to explore some new territory and hope to secure some new species of plants. Every one of our seven collecting trips in Lower California has yielded new things. This one will be into most promising territory. A price list giving the known species is being prepared. A copy will be sent on request.